

THE RELATIONSHIP BETWEEN PHILOSOPHIC PRECONCEPTIONS AND THE ECONOMIC GEOGRAPHIC MANNER OF THINKING (FROM VAUBAN TO THÜNEN)

by

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The first scientific type theories concerning the regional differentiating and spatial order of various economic phenomena were simultaneously created with the formation of scientific economic theories in the 18th and 19th centuries.

The aim of this study is to endeavour to give a theoretical explanation of the character of the results and their position in the system of sciences, and to indicate the determining effect of philosophic preconceptions on research in the specific scientific fields.

Under the theoretical basis, or more precisely preconception, those elements of the age's philosophical conception of the world are referred to that can be found at the starting points of scientific research. The acceptance of the philosophic theses with a differing character has a strong influence on the direction, content and character of the research in a specific scientific field. What is this determining role of the philosophic preconceptions that was so widely accepted in works of science history? To this question, my answer is simply my opinion. Every philosophical world conception is not only a summary of the age's knowledge and an interpretation of this from the different aspects of the society, but it also contains the analysis of the possible forms of gaining information, their evaluation and the importance of the results of the branches of science on a world scale. This latter supposes, at all times, the comparison of the links of the different branches of science among themselves and the levels of existence of reality. For example, from the point of view of raising a problem, the social-philosophic basis is determined in the case of research of an economic character, and the social-economic task is clear. The social and political ideals of the age are transferred by the social-philosophical thought, and also by the alternatives leading to them and the understanding of history reflected by these ideas. The epistemological conceptions sketch the ideal of the age's scientific research by analyzing the objectivations of human thinking. In such way, philosophic research gains a normative and orientating function. This function is reflected in those theoretical preconceptions that precede the research of the different branches of science. From the point of view of the topics of the present study, the theories of social

philosophy and epistemological conceptions of the Enlightenment and some theses of the Hegelian philosophy are important.

The type of research mentioned above, which is accepted in the bourgeois history of science (and primarily there) is only valid if it is not subject to any explanation of the formation of scientific results, nor is it the sole basis for such. The social-historic motivation is not to be neglected in the description of the development of a branch of science. Philosophic preconceptions must be regarded, as a necessary part of any theoretical scientific system, a theoretical precondition for forming scientific results, in which the social-historic basis is also expressed. Or, the latter can be part of a scientific system if it is expressed in the preconceptions.

Those social points of view, methods of scientific research, and elements of the age's natural-scientific conception of the world are fixed in the philosophic preconceptions that determine which branches of science, closely related to each other, could be formed whose scientific theses and practical results concern the spatial order of economy and its differentiation, and had a determining role in deciding the observation, practical result or scientific law in question. In the given period, those observations, connections or theses accepted as a law of science will be analyzed through the thoughts that were dealt with by the authors listed here: Vauban (1633–1707), Carnot (1753–1823), A. Smith (1723–1778) and Thünen (1783–1848), who lived much later without aiming at a complete list.

The thoughts concerning the philosophic concept of the world in the age of Enlightenment were not reflected in the same way in the various scientific branches. The differences in the development among them can be partly derived from divergencies in their intuition. The concrete fields of investigation and the usable ways and means, whether they are modern or less modern, also depend on the philosophic preconceptions. For a long time, a difference in philosophic observations, and according to this, a difference in development existed between economics and economic geography. Therefore, on the basis of revealing these differences, at least a partial answer can be gained as to why it was unambiguously economics where the first perceptions of economic-regional relations were disclosed, as a result of which the traditional question put by geography acquired an answer first given by economics.

The relatively immanent character of the existing levels of reality and genetic-historic intuition were the two philosophic thoughts that became principles, which have to be accepted in economics in order to tackle these problems.

In the philosophic world view of the age of Enlightenment and in its trends, there was a certain theory of historicity (whether it was deist or materialist). The theory of casuality and determinism means a genetic explanation of the world-phenomena, which at least characterized the entire observation of nature. The concepts of natural law and contract theory search for the basis and origin of the different social phenomena, and even if in its original form, denote the social changes and the new historically changing social-state formations.

I. By this notion I mean that world view, according to which any of the existing reality is neither understood, nor explained, purely through the experimenting of its external operating causes. The only way to understand their role in the world and the processes occurring in them can be through learning their internal structure and processes. It is merely their genesis that supposes an external cause, for the basis of their internal nature lies within them. Immanence at that time existed not as a solved problem, but primarily as a need. In the basically naturalistic age of Enlightenment ways of solution there is one motion that undoubtedly reflects the efforts towards immanence, and that is that the social products (the moral norms) are described as belonging to human nature, and then form it into a natural state. A criticism on the history of philosophy must underline that although this naturalizes a society, however, their operation reflects the need that the contents of the idea of human nature should not leap over the circle of social phenomena. This way of thinking can be depicted from the philosophy of the renaissance, especially the social-political thoughts of Macchiavelli. The individualistic view of the renaissance that also thought in independent terms does not totally disappear even in the monocratic period of mechanics, and the philosopher concentrating on social-political problems holds on to them.

In Thünen's age, primarily in the system of the Hegelian philosophy, both the historic observation and the analysis of social phenomena in an immanent way already existed as a basically important scientific and world conception requirement.

Any kind of research in economy is made possible by the genetic study of social phenomena. Research for the source of economy either results in the philosophers' stone (early mercantilists) or appears in the form of the theory of labour value, and searches for the origin of the economy, and the processes that come to existence as a result of this. And scientific social economics is formed when economy at least partly is derived from one social activity, that is a relative autonomy of social-economic phenomena is supposed.

Immanence and genetic observation together, through the new type of interpretation of the ideas of "social sphere" and "place", give a theoretic possibility to the research concerning the spatial order of the economy. The research supposes genetically and historically located "place" and "sphere" ideas, that receive their true content not only from nature, or not firstly from nature, but from social-economic processes. Although the first achievements of the research appeared within economics, these represented only a secondary problem to this branch of science. The analysis of the earthly "place", the territory, and the examination of the territorial coexistence of the existing or the separation of these was even then a task of geography. Contemporary geography dealt with nothing else but the analysis and the description of natural and political territorial units. The fact that geography only much later joined in the research of the topics is based on that the observation of geographic "place", "territory" and "spatial

connections" were not on every level of existence based on the above outlined elements of world conception in geographic descriptions.

What did contemporary geography mean by the idea of "place"? The scientific interpretation of "place" primarily consisted of its cartographic determination. The relationship to each other of the different points of the earth was also of cartographic character. This was the way to satisfy the scientific requirement that has been so since Ptolemy and since the renaissance it was a norm of the quality of science: the degree of employing mathematics.

In physical geography it was in the 18th century that a new interpretation of "place" and "spatial connections" were formed, which took as a basis both philosophic elements. Natural processes, their immanent explanation within nature in the phase of mechanical nature description became evident in geography itself. The new feature was the application of the mechanical interpretation of history.

The research carried out ranging from Pallisey to Strachey, Lehman and Hutton are evaluated as when the historic explanation of a natural region is formed. The examination of a region or one element of a region in its historicity throws a new light on the location and relation of natural regional units. The genetic examination of a natural object necessarily brings up the relationship of the object with its surroundings, in other words, it also interprets its spatial relationships. Altogether, the discovery of spatial relationships is only made possible by the genetic and historic analysis of a natural unit. So the analysis of natural location on a scientific level had already existed in physical geography.

The situation was totally different in that field of descriptions which could not have been called even economic geography. Economic phenomena and facts were discussed in the individual countries. The immanent explanation of social phenomena was not a characteristic feature of the geographic description of social-economic formations. The undoubted acceptance of the determining role of the natural surroundings abolishes the possibility to derive economic-social-political phenomena from each other, and to disclose their genetic relationships. Thus the economic phenomena and the spatial relationships of any other social phenomenon remain uninterpretable. There is no theoretical criterion on the basis of which these could be put into order. The total absence of the immanent and genetic way of observation results in the fully occasional use of categories expressing certain peculiarities of society. For this, Vauban serves as a good example in one of his geographic works. "The geographic description of Vézeley" reflects the nearly total lack of the analytic examination. The description contains the "income, quality, moral of residents and their wealth, the productivity of the country, and how its productivity could be helped and how the increase of the population and livestock could be achieved" (Vauban: *Oisivites* vol. II. *Description géographique de l'élection de Vézeley* (33)

Further on he mainly explains the economic status of the area with the nature of morals. "People in this area have a rather good contexture,

and become good soldiers, have they become home-lost, but the fields are badly cultivated: they are exempt from all industry, arts and manufacturing, which spectacularly derives from a bad intake of food. (Vauban: *Oisivites* vol. II p 33)

Vauban, who carried out multifarious scientific activity, strictly separated in his own work the geographic description and the scientific problem-raising in economics and the ways of solving these. For a person equally informed in geography and economics it was totally obvious, that he did not describe his results concerning the changing of the spatial structure of economy in his geographic works.

Both Thünen's basic ideas in philosophy were accepted in the first part of the 19th century, although it had little effect on the social parts of geography. Ritter's — Schelling based — organic conception enforces geographic determinism within geography, and Humboldt, concentrating on scientific method, enforces the Kantian line. Neither the obviously naturalist immanence, nor Humboldt's physicalist or subjectivist theory promotes the examination of the geographic relationships of the laws of economy.

II. The following examination will concentrate on the question of to what extent Smith, Vauban, Carnot and Thünen can be regarded as the first scientists using economic spatial examination, joining in the dominating lines of the economy?

In the 18th century, economic tendencies differing in observation, scientific method co-existed: mercantilism, physiocratism, classical economics and specially the German cameralism. Except from the purely physiocratic school all tendencies achieved some results in the field of economic-spatial examination.

It is not a problem to decide where Smith belonged among the different economic tendencies. He is regarded as one of the founders of the classic theory of values, and at the same time his preconceptions in the field of physiocratism and laws of nature are well known.

In his explanation of the theory of values, Smith systematically points out the spatial economic relationships. His notes are summarized in the following statement: "There is in every society or neighbourhood an ordinary or average rate both of wages and profit in every different employment of labour and stock." (Adam Smith: *An Inquiry into the Nature and Causes of the Wealth of Nations*. p 25., London 1859.)

As a consequence of the above thoughts, Smith in every concrete occurrence of labour and capital deals with the local peculiarities. He consciously deals with the value and the local differentiation of its manifestations, and only this, as it can be seen from the following sentences: "In such a work as this, however, it may sometimes be of use to compare the different real values of a particular commodity at different times and places, or the different degrees of power over the labour of other people which it may, upon different occasions, have given to those who possessed it. We must in this case compare, not so much the different quantities of silver for which it was commonly sold, as the different quantities of silver could

have purchased". (A. Smith: *An Inquiry into the Nature and Causes of the Wealth of Nations*. p 17, London 1859.)

One of the motives of Smith's research in economics is how the general laws of economics gain an individual character. This appearance of the general in the individual requires the observation of territorial differentiation. Finally it can be said that Smith's results concern the territorial differences in quantity of prices, wages, profit and allowances.

Vauban and Carnot (and as a matter of fact Thünen the cameralist, too) represent a tendency in economics, and are scientists who apply mercantilism. They carried out their activity on the basis of the acceptance of the mercantile doctrines, and the theoretical basis of their thoughts concerning the spatial order of the economy was derived from this tendency. Since Vauban's and Carnot's appropriate position among the tendencies of economics is not at all as evident like Smith's therefore in addition to summarizing their thought, I will try to attempt to prove that they were mercantilists, and that Thünen had a cameralist point of view. On the mercantilist basis of Vauban's activity, Kühn writes the following: "Recht umfangreich und vielseitig ist auch die volkswirtschaftliche Literatur über Vauban; sie gipfelt in Auseinandersetzungen darüber, ob Vauban bereits als typischer Vertreter des französischen Merkantilismus anzusehen oder ob er einer seiner Vorbereiter sei." (Artur Kühn: *Vauban und die Französische Raumordnung in 17. Jahrhundert*, Hannover 1963 p. 33.)

Vauban's mercantilism can be seen from the following statement too: "Von den Geldern, welche für die Kosten der Belagerung notwendig sind, denn da das Geld der Nerv des Krieges ist." (Marschall Vauban's *Angriff und Belagerung fester Plätze* Berlin p 26.)

In his study on the Languedoc-channel, the following sentence can be observed, that eliminates any doubt, in which he evaluates the channel: "It hinders that money lie fallow or leave the country" (Vauban: *Sur le canal de Languedoc*, Osivites vol IV.)

Vauban's activity contains examinations of a spatial economic character in two respects. Both are planning, practical in nature. Being a military engineer, it was his job to construct French castles, the basic units of military defence and to organise their supplies. In his view, a military castle undoubtedly functions as a market, and the surrounding area is the supplier. Altogether a military territorial unit in Vauban's view meant at the same time an economic unit as well. The ability of the surrounding area of a castle to supply it with either the produce and necessary labour force was equally important.

"Man braucht ferner Bauerwagen und zur Arbeit beordnete Bauern. Wenn der Platz ein wenig bedeutend ist und der Umfang seiner Circumvallationslinien mit Inbegriff ihrer ausspringenden Theile vier bis fünf Lieues beträgt so wird man wenigstens 15 - 18 000 Bauern und zwei bis drei, selbst viertausend Bauerwagen beorden müssen." (Marschall Vauban's *Angriff und Belagerung fester Plätze* Berlin p 30.)

So Vauban was a conscious organiser of a territorial economic unit. The same ideas are reflected in his work written on the Languedoc-chan-

nel, but here the territorial unit is the whole country. "The country's trade, without stepping out from the kingdom, wanders from town to town and from province to province . . . and serves the idea that through the links of the provinces with each other they can satisfy their needs from these places." (Vauban: *Sur le canal de Languedoc Ocivites* vol IV.)

Another field of his activity is also linked with the channel, and this is the theory of allowance depending on the location evaluated from an economic point of view. In this case the channel not only served as a traffic route, but also as a water-trench. The essence of the theory is that on both sides of the channel, in a decreasing rate after a certain distance, in parallel with the decrease of utilization, a royal tax can be imposed on the lands. Vauban set up five categories of taxes, the end result of which would have been 4,000 thalers per mile along the channel for the king. (Some records show this was the only mercantile tax to be greeted by the physiocratist Turgot.)

Carnot continued Vauban's activity. (In 1784 he gave a lecture at the French Academy on Vauban and later in 1788 he wrote a memorandum in Vauban's spirit for the preservation of the castles.) In the theoretical field, his works did not bring anything new compared to Vauban. He rather understood only his outstanding predecessor about whom he wrote the following: "He regarded the entire state as a huge fortress." (Carnot: *Elog S*: 19–20) To continue this thought he wrote that although the army is the active force in a country's defence, the economic status of the country, and the economic organisation of the defence is irreplaceable, and is the passive element in a country's military potential. Carnot's supplying area was modified compared to that of Vauban's to the extent that Carnot's is industry-centred. Its military merit is the technique-based army-organisation, as a result of which the development of military industry and the other industries serving as a basis for it were a major part of his conception. In his work written on the military castles the supplying region is also intended as an industrial region.

Vauban's and Carnot's activity, in contrast to that of Smith, was centred around practice. Their practical results, the organisation of regions, in their completeness, is far beyond their theoretical considerations. Their work has a theoretical basis, but the proving of the theory is not a scientific series of syllogism, but the economic usefulness, in its pragmatic character.

In professional literature, Thünen's activity is best known. In evaluating him, the fact that he was a cameralist is not too much underlined, although his whole question-raising can only be understood from this angle. Cameralism, from a social-economic point of view was the German version of mercantilism, however, at the same time his theoretical solutions reflect a totally different scientific conception. The title of his main work: "*Der isolierte Staat*" expresses the cameralist starting point. It reflects the fact that under German conditions an economic territorial unit was much more autarchic in character than the territorial units in Western Europe, and it was also a political unit. German conditions, as reflected in the following

title can be characterised like this: "Städte und Territorialstaaten als Einheiten kleineren Umfangs" (Heckscher: *Der Mercantilismus*, Jena 1932 p. 20.) The aim of cameralism is to search for the solution to economic problems within the given social-political situation.

Thünen's merits in the field of theory can be summarized in that in the theoretical apparatus of economics he does not simply find the local differences of prices, wages and allowances, but he deduces these, and analyzes the internal economic order of a territorial unit, or examines the possibility of forming an ideal order. His activity was basically of a theoretical character, in its aims, however, it also served practice. An example can be drawn from his own private life, on the other hand, it is not by mere chance that the literature concerning him and his activity searches for the immediate application of the Thünen model. (Wieskemann: *Die antike Landwirtschaft und das von Thünenische Gesetz*, Leipzig 1859) The character of the above mentioned theoretical and practical results are to be reasoned in the following through their philosophical preconceptions. These preconceptions must be searched for both in social philosophy and in the theory of knowledge.

The thoughts of Vauban, Carnot and Smith in economics are based on the theory of contracts, and the natural law conception. Within this basis of social philosophy, the different branches of this conception create the kind of difference among the tendencies of economics that determine the nature of the economic-spatial examinations on a basic level.

Two essential elements of the conceptions in natural law are the transcendent, timeless "included in everybody", conception of humanity endowed with natural characteristics, and a special interpretation of activity, which already contains a historic philosophy.

Mercantilism and physiocratism, being national economics, represented regional units. The above mentioned preconceptions in social philosophy interpret the necessary and satisfactory bases for the creation of territorial unity. Their "conception of nature" primarily leads to a different standpoint in this respect.

The content of the idea of human nature and the significance of human nature is divorced from the artificial community, the state, within the physiocratist and mercantilist theories. The physiocratist standpoint is represented in Turgot's ideas. When describing the national unity, the unity of the state, that is the artificial unity, he speaks about a national character. With the term nation's character he also understands the elements of that nation's culture as well. "Mainly, that every neighbouring nation speaking similar languages, by their natural existence must form a link, and this link represents lasting security." (Turgot). The conception of economic liberalism is supported with that thesis of anthropology, that the nature of nations, and their culture forming a part of it, is sufficient for a political state. So, an economic territorial unity of a nation-state is the natural-political community of economically independent individuals.

The mercantile conception puts only moral categories into human nature: "similarly there are moral rules of nature, and natural laws" (Carnot:

Meditation addressed to the King, Pest 1816 p 54.) The forming of the political national territorial unity requires the creation of the elements of culture, and that of economy, as well. The content of the natural community decides the sphere of operation of the artificial unity, and what the role of the society is in the creation of the ideal stage of the artificial community, the state. The difference in the interpretation of human character also results in the diverse interpretation of social activity.

In this century, in the content of the idea of activity, the rational traditions are overstepped, where it was evaluated as a motion in the process of cognition. It is recognized that social activity as being consciously creative, and it is considered possible to plan the future of society scientifically. In other words, it makes the future of mankind depend on its conscious scientific activity.

In the physiocratic conception the subject of the conscious planning of the future of the society appears in the form of a very abstract political level, the content and significance of which means the enforcement of the moral norms of natural reason as a "Sollen". The future only has to be organised legally and morally. The character of the economic theory is totally different from that of the mercantilists. "Turgot's economic thought, then was not so much a prophecy as a penetrating analysis of the economic conditions of his day, It proclaims two principles upon which he based his proposals of reform: first, that land is the unique source of wealth; and secondly that a flourishing economy depends upon an unrestrained flow of capital." (Douglas Dakin: Turgot and the ancient regime in France, London 1939 p. 295.)

The physiocratic anthropological ideas are transposed into economic views. In Smith it is primarily represented by the way he looks upon economy, basically from the point of view of individual management, therefore "the new value" is divided into different parts, which, in the form of incomes take a shape opposing each other. A direct consequence of this concept is that in examining territorial differentiation, incomes and the value serving as their basis in themselves serve as the subject of the research, in their isolation. The bases of local differentiation and the local character of rates. „are being naturally regulated, as I shall show hereafter, partly by the general circumstances of the society, their riches or poverty, their advancing, stationary, or declining condition; and partly by the particular nature of the way of employment. (A. Smith: *An Inquiry into the Nature and Causes of Wealth of Nations* p. 25. London 1859.)

From these lines the determining character of social conditions is fairly clear. The peculiar nature of the investment and application spheres is a far less evident category. Sectorial, territorial, natural and economic points of view can equally be found in it.

It recognises the relationship between the quantity of value within one unit of product and the size of the market region. (In this way the diverging characteristics of coal and rare metal mining are analyzed. A. Smith: *An Inquiry into* p. 76 – 79)

When analysing land-rent, it shows the relationship between the size of the rent and the distance from the market. (A. Smith: *An Inquiry* . . p. 67–68.) The rarity factor counts as a local economic advantage (A. Smith: *An Inquiry* . . . p. 69.)

It depicts the role of the location concerning the rent, for example the distance from the main road. (A. Smith: *An Inquiry* p. 67–68) Finally, it discusses the natural capacity of the ground, which is a basic source of the local differences in incomes. Therefore, Smith revealed many of the components between the incomes and the local differentiation of value. What he did not do in harmonizing with his capitalist-physiocratic viewpoint was to analyze the relationships of the embodiment of value within certain regions, in essence, the territorial structure-forming character of territorial differentiation.

The Vauban-type supplying region and market conception undoubtedly reflects the domination of a central interest in the economy. Although it is not on such a high level theoretically as Smith's system, being more complex it is much nearer to the thought of territorial order and spatial structure.

In discussing the theories of the mercantilists and cameralists in literature, nearly everywhere the interpretation of economic and political activities is pointed out. "Ein Prinzip das mit dem Zurückweichen der mittelalterlichen Universalstaatsideen vom modernen Nationalstaat zur Rechtfertigung seines Strebens nach Selbstbehauptung akzeptiert wurde. Sie findet auch ihr Gegenbild in der theoretischen Durchbildung des Staatsbegriffes in Staat und Völkerrecht. . . . in der Auffassung des Staates als ein Rechtesubjekts." (Dr. Luise Sommer: *Turgot and the ancient regime in France*, London 1939. p. 235.) And the state as the major legal subject maintains its right for the economy. The economy is subordinated to law and policy, but within the activity of the sovereign power planning society. Opposing physiocrats view things outside economic policy merely as activities of private life. The state policy of mercantilism is a concept creating economic unity, as pointed out by Schmoller: "Es handelt sich um der Entstehung wirklicher Volkswirtschaften, als einheitlicher Körper." (G. Schmoller: . . . Das Merkantilssystem in seiner historischen Bedeutung. *Jahrbuch für Gesetzgebung* 8. Jahrgang p. 43.)

The interpretation of the national economy as a unified body, supposes both a sectorial and regional organisation. The mercantile money-duty tax and trade theory, which are the major motives of economic policy, are the practical means of creating a national economic territorial unity. The entire economy was considered from the point of view of the interest of the entire state, and the complex economic structure was thought of in one or another area. Vauban and Carnot, with their practical work concerning the spatial structure of the economy join in the line of mercantilism. They emphasize the necessity of the territorial unity and internal economic order of a nation.

The mercantile theory of economics was first of all elaborated from the point of view of state practice. This practice, as can be seen, is funda-

mented philosophically. Therefore the works that came to light within this theory concerning the spatial structure of economy either concentrate on practice, like Vauban's and Carnot's conception of supplying regions, or are totally practical, such as the tax-region along the Languedoc-channel.

The theoretically eclectic cameralism, with its concept of a centrally organised economic policy, with which it also ensures a sovereign power for the state in economic decisions, definitely follows the line of mercantilism. Thünen's ambition, that the theoretical model should be on one hand closely related to the German conditions, and on the other hand, that the recognised connections should be utilized in the organisation of one concrete economic territorial unit, are based on this theoretical conception. It is characteristic of the thinking of all three, that when they discuss the spatial connections of economic life on any level or in any context, they regard it definitely economic.

The professional activity of the above mentioned authors reflects the domination of different conceptions of the theory of knowledge. The two main trends of the theory of knowledge in the 18th century were rationalism and sensualism. The latter existed as the survival of a medieval, in many respect Aristotelian interpretation of science. A motion of the development of scientific thinking is that later this concept of the theory of knowledge was dismissed. In every branch of the sciences the same process occurred, but not simultaneously. In economics, which compared to the natural sciences was formulated into a science in the modern sense of the word, this process also took place later. The professional separation of physiocratism, classical economics, and cameralism (in its 19th century form), covers a development in the theory of knowledge. In the 18th century, sensualism, characterising the Middle Ages before Copernicus, still survives, which searches for the essential connections of the world in its visible part, that is realizable through our senses. The criterium of scientific truth is sensorial confidence. "The concrete content of sensorial confidence is shown as the richest cognition, or more, unlimitedly rich cognition, and this richness is unlimited either if we go beyond its extension in space or in time, or if we take a part of the riches going into it by division. Besides these it appears as the truest form of cognition, since it has not left anything behind from the subject, but sees it in its full complexity. In reality, this certainty calls itself the most abstract and poorest truth. About the things it knows it only acknowledges, that they exist." (Hegel: *The phenomenology of the mind*. Budapest 1957 p. 57.)

The whole conception of mercantilism is linked to this theory of knowledge, and in this respect it is truly medieval.

Carnot openly admits the solely orientating character of pure experience. Writing on the moral laws of social existence he states: "the only thing that can teach us this is experience, and solely this can serve as a fundament" (Carnot: *Meditation adressed to the King*, Pest 1816 p 54.) His basic theory on the source of money and value can be derived from this sensualism, when he regards the source of richness in the directly conceivable by senses: money, or rather in the activity of the trader working directly

with money. Their demographic ideas are also characterized by the evidence of this sham-world. It is known that an essential element of mercantile policy was the increase of the number of the population. Vauban, as a follower of this economic policy, voices these thoughts in his demographic ideas. "I am sure that the real interest of kings is that there should be a high number of dependants in their possession." (A. Kühn: Vauban und die Französische Raumordnung in 17. Jahrhundert. Hannover 1963 p. 37).

Further on it becomes clear, that the people are not primarily regarded as a labour force, but as subjects paying tax. "The income of the king would largely increase, if those 50,000 families, not counting their accomplices, who rob out the kingdom unpunished, would be forced to earn their own living, and pay as anybody else." (Vauban: *Oisivites* vol. II. Description géographique de l'élection de Vézeley)

The theory of knowledge based on the evidence of appearance is also characterized by the indifferentiated nature of experience. I mean that in its content, pure experience by senses is not divided from pragmatical practice. (The sensualism of the 17th – 18th century was not yet positivist.)

In this undifferentiated character there are rich possibilities. Therefore it is possible that on the basis of a medieval theory of knowledge, serious achievements of bourgeois economy are realised. It does not become reactionary, it merely represents the level of common sense versus scientific thinking. As a matter of fact, this sensualism linked merely with pragmatism can have a social-economic function in as far for example it had to prove for mercantile thinkers the correctness of their ideas through the increase in the incomes of the treasury. To reach this aim and the process of the verification were the same process. This pragmatic perception of the truth was enforced by the economic practice-concentrated character of their social philosophy.

The Copernicus-turn of economics is carried out in physiocratism, where at least the surface phenomena are divided from the theoretically conceivable basic level that cannot be experienced by the senses. Here the theory of values is based on the criticism of rationalism, the sensual experience coming to force from Bacon and through Descartes. Not in the sense that it rejects the world of experiences, but in the modern scientific meaning with which they explain it.

The sphere of experiments confirms that each of the economic phenomena that were looked upon were understandable on the basis of the theory. To understand Smith's thinking it is of assistance to reveal his views of the theory of knowledge.

The scientific system of laws of economics was represented by the theory of values. Prices, wages, profits and allowances, as the forms of appearance require the genetic explanation of the theory of values. The local character of value results from the local character of the incomes. The interpretation of this link of the phenomenon and the essence were stated much later by Hegel. "The ... outer is the specific and direct surface of the inner". "... and the law says that the outer is an expression of the inner." side" (Hegel: *The phenomenology of the mind*, Bp. 1957, p. 147.)

In Smith's conception these thoughts are anticipated in the form of concrete analysis. "In great towns corn is always dearer than in remote parts of the country. This, however, is the effect not of the real cheapness of silver, but of the real dearthness of corn. It does not cost less labour to bring silver to the great town than to the remote parts of the country; but its costs a great deal more to bring corn." (A. Smith: *An Inquiry . . .* p. (87).

Thünen follows Smith in the basic relationships in the theory of knowledge. "Diese Geistesoperation ist analog dem Verfahren, welches wir bei allen Versuchen in der Physik wie in der Landwirtschaft anwenden, wo wir nämlich nur die eine zu erforschende Potenz quantitativ steigern, alle übrigen Momente aber unverändert lassen." (Thünen: *Der Isolierte Staat* p. 405. Verlag Gustav Fischer 1910) The reference to the physical experience and experiment implies that Hegelian idea of experience that is already the unity of empiria and rationality. He declares his master is Smith. "Adam Smith war in der Nationalökonomie und in der Wissenschaftlichen Landwirtschaft mein Lehrer." (Thünen: *Der Isolierte Staat* p. 40)

Thünen surpasses Smith in his examination concerning the spatial order of the economy. The significance of this is the concept concerning the world, the objects of the economic sphere as such a totality, which is not only the unity of the phenomenon and the essence, but is a totality with structure. The parts, the individual phenomena in their individual and local character suppose a concrete structure of the whole. (Thünen: *Der Isolierte Staat* p. 402.)

The period from Vauban to Thünen can be examined not only in the differences, but can be regarded as a line of scientific development. The development in the branches of science extends from pragmatic works to observations completing the theory, to the theory processing the level of the social practise in scientific laws. The process of the branches of science can't go without the philosophical development that took place between the age of enlightenment and the classical German philosophy.

РЕЗЮМЕ

СВЯЗЬ ФИЛОСОФСКИХ ПРЕДПОСЫЛОК И ЭКОНОМГЕОГРАФИЧЕСКИХ ИДЕЙ

В XVIII и начале XIX веков, одновременно с формированием научных экономических теорий, появились и первые теории научного характера, касающиеся территориальной дифференциации экономических явлений и их территориального порядка. В настоящей работе предпринята попытка дать теоретическое объяснение характера их результатов и места, занимаемого ими в системе наук, а также показать определяющий характер философских предпосылок для отраслевых научных исследований.